From: Granger, Michelle
To: Joshua.A.Watts@usace.army.mil; Erin.M.Hauber@usace.army.mil
Subject: FW: Pohatcong OU3 - mobile lab inspection
Date: Monday, April 16, 2018 2:42:10 PM
Attachments: Cascade Mobile Lab Inspection Organic Checklist.docx
Cascade Mobile Lab Inspection Report.docx

From: Cocuzza, Phil
Sent: Wednesday, April 11, 2018 7:15 AM
To: Granger, Michelle
Cc: Gabry, Jon; Sy, William
Subject: RE: Pohatcong OU3 - mobile lab inspection

Hi Michelle,

Please find attached the checklist and report for the Cascade mobile laboratory onsite inspection.

Please let me know if you have any questions.

Phil Cocuzza
HWSS Section Chief
732-321-4478

-----Original Message-----
From: Granger, Michelle
Sent: Monday, April 09, 2018 12:25 PM
To: Cocuzza, Phil <Cocuzza.Phil@epa.gov>
Subject: RE: Pohatcong OU3 - mobile lab inspection

Hi, Phil-

Thank you for the update! I sent PE results to you in a separate email.
Best,
Michelle-

From: Cocuzza, Phil
Sent: Monday, April 9, 2018 8:43 AM
To: Granger, Michelle
Subject: RE: Pohatcong OU3 - mobile lab inspection

Hi Michelle,

The inspection went well. It was a very small mobile lab, one instrument and two analysts. In general they had sufficient equipment and experience to perform the analysis. The lab was deficient in the area of health and safety, but that should not affect their ability to generate acceptable results. I asked them to send you the PE results, let me know when you receive them I will forward to QATS for scoring.

Once the PE is scored, I'll send the final report.

Phil Cocuzza
HWSS Section Chief

587888

732-321-4478

-----Original Message-----
From: Granger, Michelle
Sent: Thursday, April 05, 2018 2:31 PM
To: Cocuzza, Phil <Cocuzza.Phil@epa.gov>
Subject: Pohatcong OU3 - mobile lab inspection

Hi, Phil-

Just wondering how things went yesterday at the inspection.

Best,
Michelle-

Inspection Report
DESA

Laboratory Name: Cascade Mobile Laboratory

Location: 191 Route 31 N, Washington Boro, NJ

Superfund Site: Pohatcong OU3

Date onsite: 4/4/18

Auditors: Jon Gabry, Phil Cocuzza

Purpose

An informal inspection was conducted on the Cascade mobile laboratory working at the Pohatcong OU3 Superfund site. The purpose of the inspection was to determine if the mobile laboratory had sufficient equipment; documentation and qualified staff to conduct analysis of environmental samples.

Minor findings:

- Sample receiving refrigerator was not labeled.
- Standard storage refrigerator was not labeled.
- A SOP for sample receiving was not available upon request.
- The sample receiving area as well as the sample refrigerator were not located in a secure location. The area was used for other functions not related to sample receiving and by people not conducting sample receiving.

Major Findings:

- The lab did not have sufficient health and safety equipment and did not follow standard laboratory health and safety procedures. The staff did not use lab coats, were not wearing eye protection, did not have a hood in the sample receiving area, did not have PPE available in the sample receiving area, did not have spill pillows readily available in the lab, did not have an eyewash or shower readily available in the lab and prepared VOA standards on a bench in the open.

- The laboratory staff recorded sample weight and percent moisture on the COC. This process is not in line with good laboratory practices and increases the risk of losing the information. Sample parameters should be recorded in a laboratory log book.

Critical Findings:

- None.

Notes:

- The laboratory method QC included - MS/MSD, trip blanks, field blanks, method blanks, LCS and surrogates.
- The laboratory instrument QC included - 5+ point curve, IS, CCV and BFB tune.
- SOPs were available upon request.
- The laboratory used bottle water for blanks. The water was tested before use. Background limits were established by the laboratory.
- The analytical method SOP was based on EPA SW846 8260. Headspace analysis is conducted by the laboratory for a sub list of target compounds.
- Logbooks were available for the balance, instrument maintenance, sample sequence, standard preparation and refrigerator temperatures.
- The laboratory used a COC to accept samples from the field.
- The staff had a good understanding of the analytical method and operation of the GC/MS instrument.
- The laboratory had documentation for the instrument MDL study.
- Solvents were labeled with an expiration date.

Conclusion:

The analyst had sufficient expertise and experience with the analytical method, instrumentation and good laboratory practices to perform the analysis of environmental sample using method SW846 8260. The sample receiving and laboratory areas were well maintained and had the appropriate equipment normally observed in a mobile laboratory setting. Routine quality assurance and quality control procedures were established and documented.

The laboratory received passing scores for the performance evaluation (PE) sample (results below).

QUALITY ASSURANCE TECHNICAL SUPPORT
LABORATORY PES SCORING EVALUATION REPORT

PES:	VS1236	**EPA Sample No.:**	PE-01 VS1236	**Report Date:**	04/09/2018
Lab Name:	Cascade Technical Services - Mobile			**Lab Code:**	CTS-M
Contract:	NA	**Case No.:**	47476	**SAS/Client No.:**	NA
SDG No.:	NR	**Matrix:**	Soil	**Lab Sample ID:**	NR
Lab File ID:	NR	**Date Received:**	04/04/2018	**Date Analyzed:**	04/04/2018
Level:	Low	**Sample Wt./Vol. (g/mL):**	5.0 grams	**% Moisture:**	NA
Soil Extract Volume:	NA	**Soil Aliquot Volume:**	NA	**Dilution factor:**	1.0
Purge Volume:	NA	**pH:**	NA	**Units:**	ug/Kg
Analysis Method:	EPA Method 8260C				
Scoring Method:	SOM02.4				
Comments:	Scored by APTIM Personnel	**Mod. Ref. No.:**	NA		

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
75-71-8	Dichlorodifluoromethane	NR		NE	NE
75-01-4	Vinyl Chloride	26		Pass	Within Limits
75-00-3	Chloroethane	NR		NE	NE
75-35-4	1,1-Dichloroethene	22		Pass	Within Limits
67-64-1	Acetone	NR		NE	NE
75-15-0	Carbon Disulfide	NR		NE	NE
75-09-2	Methylene Chloride	NR		NE	NE
156-60-5	trans-1,2-Dichloroethene	54		Pass	Within Limits
75-34-3	1,1-Dichloroethane	NR		NE	NE
156-59-2	cis-1,2-Dichloroethene	61		Pass	Within Limits
67-66-3	Chloroform	NR		NE	NE
74-97-5	Bromochloromethane	NR		NE	NE
71-55-6	1,1,1-Trichloroethane	NR		NE	NE
56-23-5	Carbon Tetrachloride	NR		NE	NE
79-01-6	Trichloroethene	66		Pass	Within Limits
78-87-5	1,2-Dichloropropane	NR		NE	NE
75-27-4	Bromodichloromethane	NR		NE	NE
10061-01-5	cis-1,3-Dichloropropene	NR		NE	NE
108-10-1	4-Methyl-2-pentanone	NR		NE	NE
10061-02-6	trans-1,3-Dichloropropene	NR		NE	NE
79-00-5	1,1,2-Trichloroethane	NR		NE	NE
127-18-4	Tetrachloroethene	NR		NE	NE
591-78-6	2-Hexanone	NR		NE	NE
124-48-1	Dibromochloromethane	NR		NE	NE
106-93-4	1,2-Dibromoethane	NR		NE	NE
100-42-5	Styrene	NR		NE	NE
75-25-2	Bromoform	NR		NE	NE
79-34-5	1,1,2,2-Tetrachloroethane	NR		NE	NE

QUALITY ASSURANCE TECHNICAL SUPPORT
LABORATORY PES SCORING EVALUATION REPORT

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
541-73-1	1,3-Dichlorobenzene	NR		NE	NE
96-12-8	1,2-Dibromo-3-chloropropane	NR		NE	NE
87-61-6	1,2,3-Trichlorobenzene	NR		NE	NE
**********	**End Main Analytes**	**********	*** *	*****	********** *
**********	**End All Analytes**	**********	*** *	*****	********** *

NE = Not Evaluated NR = Not Reported NA = Not Applicable

LABORATORY ON-SITE AUDIT CHECKLIST

Laboratory Information:

Laboratory Name Cascade Mobile Lab

Date on site 4/4/18

Laboratory Personnel Contacted:

Name	Position
Colleen Small	GC/MS Analyst
David Mick (Not interviewed)	GC/MS Analyst

Audit Team:

Name	Position
Philip Cocuzza	EPA
Jon Gabry	EPA

LABORATORY ON-SITE AUDIT CHECKLIST

1.0 SAMPLE RECEIVING, STORAGE, AND DISPOSAL		Yes	No	Comment
1.1 Staffing:				
1.1.1	Are personnel designated and available for receiving samples?	☒	☐	
Personnel Interviewed:				
Name: Colleen Small		Position: GC/MS Analyst		
Name:		Position:		
Name:		Position:		
1.2 Infrastructure, Facilities, and Equipment:				
1.2.1	Security – Is the laboratory facility secure and designated secure areas locked or have restricted access?	☒	☐	Basic door locks
1.2.2	Is the sample receiving area secured (i.e., locked to prevent entry of unauthorized personnel, etc.)?	☒	☐	Basic door locks
1.2.3	Work Area – Is the work space for sample receipt adequate, clean, and organized for receiving and processing the anticipated sample shipments?	☒	☐	Area shared for other use.
1.2.4	Ventilation — Is adequate ventilation (i.e. functional fume hoods) available to facilitate safe opening of sample containers?	☐	☒	No hood in sample receiving.
1.2.5	Safety Equipment – Is standard safety equipment (i.e., spill mitigation, fume hoods, fire extinguishers,etc.) available in the sample receiving area? Do laboratory personnel use **PPE** (i.e., lab coats, safety glasses, gloves, etc.) when processing sample shipments?	☐	☒	Staff not wearing lab coats. gloves or eye protection for sample receipt.
1.2.6	Does the laboratory maintain a reference file of SDSs and OSHA regulations?	☒	☐	Electronic
1.2.7	Is exposure to chemicals reduced to the lowest level possible by whatever means available?	☐	☒	Standard prep on open bench, no room in hood for lab work.
1.3 Sample Receiving:				
1.3.1	Is the sample shipping container temperature documented?	☐	☐	NA
1.3.2	Sample pH Determination – Are the necessary pH testing equipment, supplies, and materials available for use?	☐	☐	NA
1.3.3	Temperature Determination - Are the necessary temperature testing equipment, calibrated thermometers, supplies, and materials available for use?	☒	☐	Electronic thermometers, not calibrated.

LABORATORY ON-SITE AUDIT CHECKLIST

1.0 SAMPLE RECEIVING, STORAGE, AND DISPOSAL	Yes	No	Comment
1.4 Sample Identification and Tracking:			
1.4.1 Is each sample and sample preparation container labeled with a unique identification number (i.e., laboratory identification number)?	☒	☐	
1.4.2 Does the laboratory track sample location and transfers within the laboratory facility?	☐	☐	NA, small truck connected to a small trailer.
1.5 Sample Storage:			
1.5.1 Are storage areas (refrigerated and non-refrigerated) designated for prepared samples?	☒	☐	The refrigerators were not labeled, but the analyst was able to quickly identify designated storage areas.
1.5.2 Is the temperature of each sample, sample extract, and standards storage refrigerator/freezer documented daily?	☒	☐	Temperature is logged daily.
1.7 Sample Security and Chain-of-Custody (COC):			
1.7.1 Does the laboratory maintain and document sample custody from receiving through retention and/or disposal?	☒	☐	
1.8 Records and Documentation:			
1.8.1 Does the laboratory currently record and document all activities performed on Government-furnished samples?	☐	☐	NA
1.8.2 Do logbooks and other laboratory documentation (i.e., sample receipt logs, login documents, storage logs, COC documents, tracking records, temperature logs, etc.) reflect appropriate document control?	☒	☐	
2.0 GC/MS VOLATILES ANALYSIS			
2.1 Staffing:			
2.1.1 Are personnel designated and available for GC/MS analyses?	☒	☐	
2.1.2 Are the qualifications (i.e., experience and/or training) of laboratory personnel performing VOA analyses documented?	☐	☒	The analyst understood the requirements of the analytical methods, was familiar with instrument operation and maintenance and GLP; however, documentation was not present on-site

2.0 GC/MS VOLATILES ANALYSIS		Yes	No	Comment
2.2 Infrastructure, Facilities, and Equipment				
2.2.1	Work Area – Is adequate work space available for VOA analysis?	☒	☐	
2.2.2	Is the work area clean and organized?	☒	☐	
2.2.3	Ventilation – Is adequate ventilation (i.e., functional fume hoods) available to facilitate safe working conditions during these procedures?	☐	☒	Fume hood is used to house a small oven. Not enough room for bench work.
2.2.4	Are the VOA analysis areas completely free of solvents?	☒	☐	Methanol is the only solvent used.
2.2.5	Safety Equipment – Is standard safety equipment (i.e., fume hoods, eyewash and chemical removal showers, etc.) available in the GC/MS volatiles analysis area? Do laboratory personnel use PPE in the course of their duties?	☐	☒	Hood not used for lab work, no lab coats, no eyewash, no spill pillows visible.
2.4 Sample and Standard Storage:				
2.4.1	Does the laboratory have adequate storage space to store volatile samples, sample extracts, and standards? Are volatile sample extracts, and standards stored separately from other samples, sample extracts, and standards?	☒	☐	
2.4.2	Are volatile samples, sample extracts, and standards stored in an atmosphere demonstrated to be free of all potential contaminants?	☒	☐	
2.4.3	Are volatile samples stored in a refrigerator used only for the storage of volatile samples?	☒	☐	
2.4.4	Are unpreserved samples analyzed within 24 hours of sample receipt or stored at <-7°C until time of preparation and analysis?	☐	☐	NA
2.4.5	Are the standard solutions retained and used after the expiration date?	☐	☒	
2.4.6	After the seal on an ampulated standard is broken, is the standard used within 6 months?	☐	☐	Did not check. The laboratory marks the solvents with expiration dates.
2.5 Sample, Extract, and Standard Identification and Tracking				
2.5.1	Is each sample and sample preparation container labeled with a unique identification number?	☒	☐	
2.5.2	Are standard solutions clearly labeled?	☒	☐	
2.5.3	Are sample extract notebooks/logs maintained, available, and reviewed?	☐	☐	NA, head space analysis

LABORATORY ON-SITE AUDIT CHECKLIST

2.0 GC/MS VOLATILES ANALYSIS	Yes	No	Comment
2.6 Reagents and Standards VOA			
2.6.1 Is reagent water available?	☐	☒	The laboratory uses bottle water, the water is tested before use.
2.6.2 Is the manufacturer's certificate of analysis for each standard and the analytical documentation that the purity of each standard is correctly stated maintained and available upon request?	☒	☐	
2.6.3 Are logbooks kept for standard preparation?	☒	☐	
2.7 Equipment and Supplies:			
2.7.1 Equipment and Supplies - Are required equipment and supplies available for use?	☒	☐	
2.8 Instrumentation Information:			
2.8.1 Are the GC/MS systems vented to outside the facility or to a trapping system which prevents the release of contaminants into the instrument room?	☒	☐	
2.8.2 Is a permanent maintenance record maintained, available, and reviewed for each GC/MS instrument used for analysis?	☒	☐	
2.9 Equipment and Instrument Calibration:			
2.9.1 Standard Operating Procedures (SOPs) - Are SOPs maintained and available?	☒	☐	Yes except for sample receiving.
2.9.2 Are the BFB instrument performance check, initial calibration, and continuing calibration analyses performed at the required frequencies and in accordance with SOP?	☒	☐	
2.10 Sample Analysis:			
2.10.1 Are all samples, required blanks, and standard/spiking solutions analyzed under the same instrument conditions?	☒	☐	
2.10.2 Method and Instrument Blanks – Are method blanks performed in accordance with SOP requirements?	☒	☐	
2.10.3 Are instrument blanks analyzed after high level samples to demonstrate that subsequent analyses had no carryover?	☐	☐	NA, head space analysis.
2.10.4 Are DMC, matrix, and internal standard spiking solution added to sample vials just prior to analysis	☒	☐	The lab uses surrogates and IS.
2.10.5 Are all target analytes within calibration range?	☒	☐	
2.10.6 Manual Integrations	☒	☐	Manual integration is documented by the analyst.
2.10.7 Do VOA analysis SOPs include procedures for manual integrations?	☒	☐	
2.10.8 In all instances where the data system report has been edited or where manual integration or quantitation has been performed, does the GC/MS operator initial and date the changes made to the report to identify the edits and/or the manual procedures and include the integration scan range? And are manual integrations documented in the Narrative?	☐	☒	The quant report is signed after manual integration.

SOW SOM02.2 LABORATORY ON-SITE AUDIT CHECKLIST

2.0 GC/MS VOLATILES ANALYSIS	Yes	No	Comment
2.12. Method Detection Limits (MDL) Determination			
2.12.1 Have MDLs been determined?	☒	☐	
2.14 Records and Documentation:			
2.14.1 Does laboratory documentation (i.e., notebooks; sample receipt, storage, and temperature logs; login, COC, and tracking records; other laboratory documents, etc.) reflect appropriate document control?	☒	☐	
3.9 Equipment and Supplies (Percent Solids Determination)			
3.9.1 Top loader balance (300 g capacity; minimum ±1.0 mg)?	☒	☐	Balance is checked before use.